



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,754	02/23/2004	Rafi Rabipour	85773-447	6181
7590 02/26/2010				
SMART & BIGGAR				
Suite 3400				
1000 de la Gauchetiere Street West				
Montreal, QC H3B 4W5				
CANADA				
EXAMINER				
CHU, WUTCHUNG				
ART UNIT		PAPER NUMBER		
2468				
MAIL DATE		DELIVERY MODE		
02/26/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



### Office Action Summary

**Application No.**

10/782,754

**Applicant(s)**

RABIPPOUR ET AL.

**Examiner**

WUTCHUNG CHU

**Art Unit**

2468

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_



**DETAILED ACTION**

***Response to Amendment***

1. This communication is in response to application's amendment filed on 12/4/2009. Claims 1-23 are pending.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 12 and 13 recites the limitation "the communication" in line 5 and line 7 respectively. There is insufficient antecedent basis for this limitation in the claim.
4. Claims 19 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "negative", recites in claim 19 line 5 and claim 21 line 5, which is used to describe establishing a codec-bypass connection is vague and indefinite because it is not known the metes and bounds of the claimed invention. The term "negative" needs to be specified, as defined in the specification, as what it represents in the codec-bypass operation.

***Claim Rejections - 35 USC § 103***

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.



4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaffer et al., hereinafter Shaffer, (US6324409) in view of Harada (US7240000).

**Regarding claims 1, 16, and 17, Shaffer disclose a system and method for optimizing telecommunication signal quality (see Shaffer col. 2 lines 18 to col. 3 lines 15 and Program instruction col. 4 line 18) comprising:**

- a first interface for exchanging data with a first neighboring entity **(see Shaffer figure 2 box 202 gateway and col. 6 line 8 which interfaces with box 200 TOL client);**
- a second interface for exchanging data with a second neighboring entity **(see Shaffer figure 2 box 202 gateway and col. 6 lines 8-10 second interface of gateway connect to box 204 PBX);**
- a memory for storing codec information regarding said communication apparatus **(see Shaffer col. 8 lines 64 to col. 9 lines 10);**
- a control entity operative to detect a first message from the first neighboring entity via the first interface, the first message being indicative of codec information regarding an originating entity **(see Shaffer figure 4 box 400 and**



**404 signaling message then collects at least one capability (signal coding and compression) of the receiver);**

- responsive to detection of the first message, the control entity being operative to perform an assessment of compatibility between the codec information regarding the originating entity and the codec information regarding said communication apparatus **(see Shaffer figure 4 boxes 406 and 408 determining an end-to-end coding scheme);**

Shaffer disclose all the subject matter of the claimed invention with the exception of:

- responsive to the assessment of compatibility being positive, the control entity being operative to self-identify the communication apparatus as a candidate for terminally supporting a subsequent codec-bypass negotiation with the originating entity;
- responsive to the assessment of compatibility being negative, the control entity being operative to self-identify the communication apparatus as a candidate for non-terminally supporting a subsequent codec-bypass negotiation with the originating entity.

Harada from the same or similar fields of endeavor teaches the use of:

- Determining if same coding type and indication of whether it is the same type or not for coding-bypass communication or tandem communication **(see Harada figure 7 boxes 11-13 and col. 7 lines 31-44).**

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the determination if using the same coding **(see Harada figure 7**



**boxes 11-13 and col. 7 lines 31-44)** as taught by Harada in the system and method for optimizing telecommunication signal quality of Shaffer in order to reduce the load of IP network and increase the signal quality of speech **(see Harada col. 4 lines 13-34).**

**Regarding claim 2**, Shaffer and Harada teach further comprising:

- responsive to the assessment of compatibility being positive, the control entity being further operative to release a second message towards the first neighboring entity via the first interface **(see Shaffer figure 4 box 410 send another message instructing intermediary stations to follow end-to-end coding scheme for the call)**, the second message being indicative of the communication apparatus being self-identified as a candidate for terminally supporting a subsequent codec-bypass negotiation with the originating entity **(see Harada figure 7 boxes 11-13 and col. 7 lines 31-44).**

**Regarding claim 3**, Shaffer disclose all the subject matter of the claimed invention with the exception of:

- responsive to absence of any message from the second entity indicative of the second entity being self-identified as a candidate for terminally supporting a subsequent codec-bypass negotiation with the originating entity, effecting said subsequent codec-bypass negotiation with the first entity.

Harada from the same or similar fields of endeavor teaches the use of:

- indication of whether it is the same type or not for coding-bypass communication or tandem communication **(see Harada figure 7 boxes 11-13 and col. 7 lines 31-44)** and it would have been obvious to one of ordinary skill in the art at the



time of the invention to use the absence of any message as indicative of terminally supporting codec-bypass.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the indication of whether the same type of coding in the codec-bypass operation (**see Harada figure 7 boxes 11-13 and col. 7 lines 31-44**) as taught by Harada in the system and method for optimizing telecommunication signal quality of Shaffer in order to reduce the load of IP network and increase the signal quality of speech (**see Harada col. 4 lines 13-34**).

**Regarding claim 4**, Shaffer and Harada teach further comprising: the control entity being operative to forward the first message to the second remote entity via the second interface (**see Shaffer figure 5 boxes 504 and 506 and col. 7 lines 50-65**).

**Regarding claim 5**, Shaffer and Harada teach the first and second interfaces are packet interfaces (**see Shaffer col. 8 lines 56-63**).

**Regarding claim 6**, Shaffer and Harada teach the first interface is a packet interface (**see Shaffer col. 8 line 61**) and the second interface is a circuit-switched interface (**see Shaffer col. 6 lines 2-26 and col. 8 line 24**).

**Regarding claim 7**, Shaffer and Harada teach the first and second interfaces are circuit-switched interfaces (**see Shaffer col. 8 line 27**).

**Regarding claim 8**, Shaffer and Harada teach the - detect a second message received from the second neighboring entity, the second message being indicative of the second neighboring entity apparatus being self-identified as a candidate for terminally supporting a subsequent codec-bypass negotiation with the originating entity



**(see Shaffer figure 5A box 510 Gateway y sends a second signaling message to gateway X to inform gateway x of client B's and intermediate stations' capabilities and col. 7 lines 66 to col. 8 lines 16);**

responsive to detection of the second message, self-identify the communication apparatus as a candidate for non-terminally **(see Shaffer figure 5A box 510 Gateway y sends a second signaling message to gateway X to inform gateway x of client B's and intermediate stations' capabilities and col. 7 lines 66 to col. 8 lines 16)** supporting a subsequent codec-bypass negotiation with the originating entity **(see Harada figure 7 boxes 11-13 and col. 7 lines 31-44).**

**Regarding claim 9, Shaffer and Harada teach the further comprising:**  
the control entity being operative to forward the second message to the first remote entity via the first interface **(see Shaffer figure 5A box 510 Gateway y sends a second signaling message to gateway X to inform gateway x of client B's and intermediate stations' capabilities and col. 7 lines 66 to col. 8 lines 16).**

**Regarding claim 10, Shaffer and Harada teach the further comprising:**  
the control entity being further operative to monitor messages exchanged via the first and second interfaces that are indicative of negotiation **(see Shaffer col. 8 lines 64 to col. 9 lines 27 and col. 4 lines 5-11)** of a codec-bypass connection between the originating entity and an entity different from the originating entity **(see Harada figure 7 boxes 11-13 and col. 7 lines 31-44).**

**Regarding claim 11, Shaffer and Harada teach the control entity is further operative to:**



detect success or failure of said first negotiation; and responsive to failure of said first negotiation **(see Shaffer figure 6B box 654 is there a result with no transcoding and boxes 656 and 658 determining if there is a codec-bypass/transcoding-free operation and figure 5A box 513 send a third signaling message to inform all stations of coding scheme)**, and if the communication apparatus is self-identified as a candidate for terminally supporting a subsequent codec-bypass negotiation with the originating entity, negotiate with the originating entity a codec-bypass connection between the communication apparatus and the originating entity **(see Harada figure 7 boxes 11-13 and col. 7 lines 31-44)**.

**Regarding claim 12**, Shaffer and Harada teach further comprising:  
responsive to success of said first negotiation, and if the communication apparatus is self-identified as a candidate or terminally supporting a subsequent codec-bypass negotiation with the originating entity **(see Shaffer figure 6B box 654 is there a result with no transcoding and boxes 656 and 658 determining if there is a codec-bypass/transcoding-free operation and figure 5A box 513 send a third signaling message to inform all stations of coding scheme)**, the control entity being operative to self-identify the communication as a candidate for non-terminally supporting a codec-bypass negotiation with the originating entity **(see Harada figure 7 boxes 11-13 and col. 7 lines 31-44)**.

**Regarding claim 13**, Shaffer and Harada teach negotiation being a first negotiation, wherein the control entity is further operative to: detect success or failure of said first negotiation; and responsive to success of said first negotiation **(see Shaffer figure 6B**



**box 654 is there a result with no transcoding and boxes 656 and 658 determining if there is a codec-bypass/transcoding-free operation and figure 5A box 513 send a third signaling message to inform all stations of coding scheme)**, and if the communication apparatus is self-identified as a candidate or terminally supporting a subsequent codec-bypass negotiation with the originating entity, the control entity being operative to self-identify the communication as a candidate for non-terminally supporting a codec-bypass negotiation with the originating entity **(see Harada figure 7 boxes 11-13 and col. 7 lines 31-44)**.

**Regarding claim 14**, Shaffer and Harada teach the originating entity is an endpoint gateway **(see Shaffer col. 8 line 8 sender's gateway and figure 2 box 202)**.

**Regarding claim 15**, Shaffer and Harada teach the originating entity is an in-path gateway **(see Shaffer col. 6 lines 23-29)**.

**Regarding claims 18**, Shaffer disclose a system and method for optimizing telecommunication signal quality **(see Shaffer col. 2 lines 18 to col. 3 lines 15)** comprising:

identifying a target in-path gateway from among the plurality of in-path gateways **(see Shaffer figure 4 box 400 and 404 signaling message then collects at least one capability (signal coding and compression) of the receiver)**, establishing a connection between the first gateway and the target in-path gateway **(see Shaffer figure 4 boxes 406 and 408 determining an end-to-end coding scheme and col. 7 lines 38-45)**.

Shaffer disclose all the subject matter of the claimed invention with the exception of:



- the target in-path gateway being the in-path gateway furthest along the path from the first gateway which is characterized by codec-bypass connection compatibility with the first gateway;

Harada from the same or similar fields of endeavor teaches the use of:

- Determining if same coding type and indication of whether it is the same type or not for coding-bypass communication or tandem communication **(see Harada figure 7 boxes 11-13 and col. 7 lines 31-44)**.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the determination if using the same coding **(see Harada figure 7 boxes 11-13 and col. 7 lines 31-44)** as taught by Harada in the system and method for optimizing telecommunication signal quality of Shaffer in order to reduce the load of IP network and increase the signal quality of speech **(see Harada col. 4 lines 13-34)**.

**Regarding claims 19**, Shaffer and Harada teach further comprising:  
performing a determination of whether the target in-path gateway is involved in a prior codec-bypass connection with the second gateway; wherein performing the establishing is conditional upon said determination being negative **(see Harada figure 7 boxes 11-13 and col. 7 lines 31-44 indication of whether it is the same type or not for coding-bypass communication or tandem communication and it would have been obvious to one of ordinary skill in the art at the time of the invention to use the absence of any message as indicative of terminally supporting codec-bypass)**.



8. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaffer and Harada as applied to claim 18 above, and further in view of Alperovich et al., hereinafter Alperovich, (US6600738).

**Regarding claims 20**, Shaffer and Harada teach the target in-path gateway being a first target in-path gateway, the method further comprising:

- responsive to said determination being positive **(see Harada figure 7 boxes 11-13 and col. 7 lines 31-44 indication of whether it is the same type or not for coding-bypass communication or tandem communication and it would have been obvious to one of ordinary skill in the art at the time of the invention to use the absence of any message as indicative of terminally supporting codec-bypass)**:

Shaffer and Harada disclose all the subject matter of the claimed invention with the exception of:

- identifying a second target in-path gateway from among the plurality of in-path gateways, the second target in-path gateway being the in-path gateway furthest along the path from the first gateway which is characterized by codec-bypass connection compatibility with the first gateway and which is not involved in a codec-bypass connection with the second gateway; establishing a codec-bypass connection between the first gateway and the second target in-path gateway instead of with the first target in-path gateway.

Alperovich from the same or similar fields of endeavor teaches the use of:

- A plurality of gateways **(see Alperovich col. 4 lines 50-57)**; the ranking of the possible pathways **(see Alperovich col. 6 lines 27-28)**; the gateways are



ranked based on the gateway codec availability, and the core network is adapted to route a voice call as a function of the gateway ranking (**see Alperovich col. 2 lines 9-11**); allows a call to be placed over the core IP network for as long as possible to decrease transmission costs (**see Alperovich col. 6 lines 35-38**).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the ranking and path selection as taught by Alperovich in the modified system and method for optimizing telecommunication signal quality of Shaffer and Harada in order to decrease transmission costs (**see Alperovich col. 6 lines 35-38**).

**Regarding claims 21**, Shaffer and Harada teach further comprising:

performing a determination of whether the target in-path gateway is involved in a prior codec-bypass connection with the second gateway; wherein performing the establishing is conditional upon said determination being negative (**see Alperovich col. 6 lines 35-38**).

9. Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alperovich et al., hereinafter Alperovich, (US6600738) in view of Harada (US7240000).

**Regarding claims 22**, Alperovich discloses a routing in an IP network based on codec availability and subscriber preference (**see Alperovich col. 1 line 52 to col. 2 line 51**) comprising:

- identifying a first sub-path between the first gateway and a first target in-path gateway from among the plurality of in-path gateways, the first target in-path gateway being the in-path gateway furthest along the path from the first gateway (**see Alperovich col. 6 lines 36-38**);



- identifying a second sub-path between the second gateway and a second target in-path gateway from among the plurality of in-path gateways, the second target in-path gateway being the in-path gateway furthest along the path from the second gateway **(see Alperovich col. 6 lines 36-38)**;
- determining the lengths of the first and second sub-paths; if the first sub-path is longer than the second sub-path, establishing a codec-bypass connection between the first gateway and the first target gateway; if the second sub-path is longer than the first sub-path, establishing a codec-bypass connection between the second gateway and the second target gateway **(see Alperovich col. 6 lines 36-54)**.

Alperovich discloses all the subject matter of the claimed invention with the exception of:

- which is characterized by codec-bypass connection compatibility with the first gateway;
- which is characterized by codec-bypass connection compatibility with the second gateway

Harada from the same or similar fields of endeavor teaches the use of:

- coding-bypass communication **(see Harada figure 7 boxes 11-13 and col. 7 lines 31-44)**

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the coding-bypass communication **(see Harada figure 7 boxes 11-13 and col. 7 lines 31-44)** as taught by Harada in the routing in an IP network based on



codec availability and subscriber preference of Alperovich in order to reduce the load of IP network and increase the signal quality of speech (**see Harada col. 4 lines 13-34**).

10. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alperovich and Harada as applied to claim 22 above, and further in view of Shaffer et al., hereinafter Shaffer, (**US6324409**).

**Regarding claims 23**, Alperovich and Harada teach the codec-bypass connection (**see Harada col. 4 lines 13-34**), and

disclose all the subject matter of the claimed invention with the exception of:

- if the first sub-path is not longer than the second sub-path and the second sub-path is not longer than the first sub-path;
- determining the priorities of compatibility of the first target gateway with the first gateway and of the second target gateway with the second gateway and;
- if the compatibility of the first target gateway with the first gateway has a greater priority than the connection compatibility of the second target gateway with the second gateway,  
establishing a connection between the first gateway and the first target gateway;
- if the connection compatibility of the second target gateway with the second gateway has a greater priority than the connection compatibility of the first target gateway with the first gateway, establishing a connection between the second gateway and the second target gateway.

Shaffer from the same or similar fields of endeavor teaches the use of:



- Determine if there is a tie in the results of minimum transcoding (**see Shaffer figure 6B box 658-660 and col. 9 lines 36-61**); and select result which is higher in the preference list (**see Shaffer figure 6B box 666 as corresponds to priority and col. 9 lines 36-61**).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the determination if there is a tie and select result which is higher in the preference list (**see Shaffer figure 6B box 666 as corresponds to priority and col. 9 lines 36-61**) as taught by Shaffer in the modified system of routing in an IP network based on codec availability and subscriber preference of Alperovich and Harada in order to optimize telecommunication signal quality (**see Shaffer col. 3 lines 6-15**).

#### ***Response to Arguments***

11. Applicant's arguments, see Remarks pages 2-7, filed 12/4/2009, with respect to Double patenting rejection have been fully considered and are persuasive. The double patenting rejection has been withdrawn.
12. Applicant's arguments with respect to claim 1-23 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chang et al. (US7280530) and Hellwig et al. (US6295302).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WUTCHUNG CHU whose telephone number is (571) 272-4064. The examiner can normally be reached on 9am to 5pm.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Ryman can be reached on (571) 272-3152. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Wutchung Chu/  
AU2468

/Melanie Jagannathan/

Primary Examiner, Art Unit 2468